

ABSTRACT

There is provided an antenna array apparatus using a GPS signal in a base station and a beamforming method thereof. In the antenna array apparatus, 5 a GPS signal processor receives GPS position information from a mobile station and calculates the position information of the mobile station. A signal processor calculates a weight vector using the position information to form a transmission/reception beam. A transmission/reception beamformer forms the transmission/reception beam according to the weight vector.

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